

<p>DOCKET NO. 428 – New Cingular Wireless PCS, LLC } (AT&T) application for a Certificate of Environmental } Compatibility and Public Need for the construction, } maintenance, and operation of a telecommunications facility } located at one of two sites: Roxbury Tax Assessor Parcel ID } #32-008 off of Route 67, Roxbury, Connecticut, or 126 } Transylvania Road, Roxbury, Connecticut.</p>	<p>Connecticut Siting Council March 21, 2013</p>
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Findings of Fact

Introduction

1. New Cingular Wireless PCS, LLC (AT&T), in accordance with provisions of Connecticut General Statutes (C.G.S.) § 16-50g through 16-50aa, applied to the Connecticut Siting Council (Council) on July 3, 2012 for the construction, maintenance, and operation of a 170-foot wireless telecommunications facility off of Route 67 at Town of Roxbury Tax Assessor Parcel Identification Number 32-008, referred to as the Site A, or at 126 Transylvania Road, referred to as the Site B, in Roxbury, Connecticut. (AT&T 1, p. 1)
2. AT&T is a Delaware limited liability company with an office at 500 Enterprise Drive, Rocky Hill, Connecticut. The company’s member corporation is licensed by the Federal Communications Commission (FCC) to construct and operate a personal wireless services system. The company does not conduct any other business in the State of Connecticut other than the provision of wireless services under FCC rules and regulations. (AT&T 1, p. 3)
3. The parties in this proceeding are the applicant, the Town of Roxbury (Town), and the Town of Woodbury. The intervenor in this proceeding is Bronson Mountain Farm Homeowners Association (BMFHA). (Transcript 1- September 18, 2012, 3:37 p.m. [Tr. 1], pp. 4 and 14)
4. The purpose of the proposed facility is to provide service to coverage gaps identified by AT&T along Route 67, Route 172 and other local roads and the surrounding area including southern Roxbury, western Woodbury and northern Southbury. (AT&T 1, p. 1)
5. Pursuant to C.G.S. § 16-50m, the Council, after giving due notice thereof, held a public hearing on September 18, 2012, beginning at 3:37 p.m. and continuing at 7:00 p.m. at the Roxbury Town Hall, 29 North Street, Roxbury, Connecticut. (Council’s Hearing Notice dated July 27, 2012; Tr. 1, p. 3; Transcript 2 – September 18, 2012, 7:00 p.m. [Tr. 2], p. 3)
6. The Council and its staff conducted an inspection of the proposed sites on September 18, 2012, beginning at 2:00 p.m. The day of the field inspection, the applicant flew a four-foot diameter red balloon at both Site A and Site B to simulate the height of the proposed towers. Weather conditions from 8:00 a.m. to 11:00 a.m. were overcast with rain and calm winds. The balloons were at the respective proposed heights for a majority of that time, but at approximately 11:30 to 11:45 a.m., weather conditions deteriorated. The winds increased, and both balloons were lost. AT&T attempted to fly two more at each location, but those were also lost. (Council’s Hearing Notice dated April 12, 2003; Tr. 1, p. 6)
7. The Council continued the public hearing on December 6, 2012 at 11:00 a.m. at 10 Franklin Square, New Britain, Connecticut. (Transcript 3 – December 6, 2012, 11:00 a.m. [Tr. 3], p. 3)
8. Pursuant to C.G.S. § 16-50l (b), public notice of the application was published in Voices on May 30, 2012 and June 6, 2012. (AT&T 1, p. 4 and Tab 9)

9. Pursuant to C.G.S. § 16-50l(b), notice of the application was provided to all abutting property owners by certified mail. Three return receipts were not returned. Notices were re-sent by first class mail to Adam & Maria Waganblas, Ann Van Saun, and High Meadow Riding Club. The letter to Ann Van Saun was subsequently returned as undelivered. Another notice was set to a corrected address available through the Roxbury Tax Assessor's records of 2123 South Britain Road, Southbury. (AT&T 1, p. 4 and Tab 8; AT&T 3, response 4)
10. Pursuant to C.G.S. § 16-50l (b), AT&T provided notice to all federal, state and local officials and agencies listed therein. (AT&T 1, p. 4 and Tab 8)

State Agency Comment

11. Pursuant to CGS § 16-50j(h), on July 27, 2012, the Council solicited comments on this application from the following state agencies: Department of Agriculture, Department of Energy & Environmental Protection (DEEP), Department of Public Health, Council on Environmental Quality, Public Utilities Regulatory Authority, Office of Policy and Management, Department of Economic and Community Development, the Department of Transportation (ConnDOT), and the Department of Emergency Services and Public Protection. (CSC Hearing Package dated July 27, 2012)
12. The Council did not receive any comments from state agencies. (Record)

Municipal Consultation

13. AT&T filed a technical report for the Site B facility with the Town of Roxbury (Town) on August 26, 2009 in order to commence the formal municipal consultation. (AT&T 1, p. 12)
14. Public meetings were held in the Town on September 24, 2011 and December 15, 2011. Discussions with First Selectman Henry, the Town Inland Wetlands Commission, Conservation Commission, and local residents revealed concerns related to the Site B location. (AT&T 1, p. 12)
15. These concerns included storm water drainage, visibility of the proposed tower, and proximity to nearby homes. AT&T was strongly encouraged by the Town and the State Attorney General to review alternative locations including that owned by C.N. Builders, which would eventually become Site A. (AT&T 1, p. 12)
16. Specifically, by letter dated February 16, 2010, the Town Inland Wetlands Commission stated that Site B has four shortcomings that need to be addressed.
 - a) The proposed access drive is too steep. The grade of 21 percent exceeds the Town's ordinance of a maximum of 15 percent.
 - b) The proposed drainage system is inadequate to handle the resulting storm water runoff.
 - c) The proposal would result in flooding on down-gradient wetlands and other properties.
 - d) The proposal does not identify the location(s) of the septic systems at 126 Transylvania Road.(Town 4)

17. AT&T notes that the driveway would be designed with infiltrators to accommodate the difference in runoff between existing and proposed conditions to meet a 25-year, 24-hour storm standard. (Tr. 3, p. 9)
18. AT&T also notes that while wetlands are located on the opposite side of Transylvania Road, given the drainage design, adverse impacts to downstream wetlands are not expected. (Tr. 3, p. 10)
19. AT&T filed a technical report for the Site A facility with the Town on September 30, 2011 to commence the formal municipal consultation for this site. (AT&T 1, p. 13)
20. A public meeting regarding Site A was held at the Town Hall on November 17, 2011. (AT&T 1, p. 13)
21. First Selectman Henry testified that the Town's preference is for AT&T to upgrade its technology to avoid the need for an additional tower. First Selectman Henry also expressed concerns that there are drainage issues associated with the one-lane dirt Town-maintained Transylvania Road. The other concern is that the addition of a tower with its proposed driveway at Site B would worsen an already bad situation. (Tr. 3, p. 72; Town 1; AT&T 1, p. 12)
22. Of the two proposed sites, First Selectman Henry testified that Site A would involve "the least disturbance all the way around." (Tr. 3, p. 72)
23. AT&T Wireless would provide space on the tower proposed at either site for the Town's emergency communication services for no compensation. (Tr. 1, p. 39)
24. The Town's emergency services needs are currently being covered, but the Town would co-locate on a tower at either Site A or Site B if it had the opportunity. (Tr. 3, p. 69)

Public Need for Service

25. In 1996, the United States Congress recognized a nationwide need for high quality wireless telecommunications services, including cellular telephone service. Through the Federal Telecommunications Act of 1996, Congress seeks to promote competition, encourage technical innovations, and foster lower prices for telecommunications services. (Council Administrative Notice Item No. 4)
26. In issuing cellular licenses, the Federal government has preempted the determination of public need for cellular service by the states, and has established design standards to ensure technical integrity and nationwide compatibility among all systems. AT&T is licensed by the FCC to provide personal wireless communication service to Litchfield County, Connecticut. (Council Administrative Notice Item No. 4; AT&T 1, p. 3 and Tab 2, p. 3)
27. The Telecommunications Act of 1996 prohibits local and state entities from discriminating among providers of functionally equivalent services. (Council Administrative Notice Item No. 4)
28. The Telecommunications Act of 1996 prohibits any state or local entity from regulating telecommunications towers on the basis of the environmental effects, which include human health effects, of radio frequency emissions to the extent that such towers and equipment comply with FCC's regulations concerning such emissions. This Act also blocks the Council from prohibiting or acting with the effect of prohibiting the provision of personal wireless service. (Council Administrative Notice Item No. 4)

29. The Wireless Communications and Public Safety Act of 1999 (911 Act) was enacted by Congress to promote and enhance public safety by making 9-1-1 the universal emergency assistance number, by furthering deployment of wireless 9-1-1 capabilities, and by encouraging construction and operation of seamless ubiquitous and reliable networks for wireless services. (Council Administrative Notice Item No. 6)
30. AT&T's facility would be in compliance with the requirements of the 911 Act (AT&T 2, response 6)
31. In December 2009, President Barack Obama recognized cell phone towers as critical infrastructure vital to the United States. The Department of Homeland Security, in collaboration with other Federal stakeholders, State, local, and tribal governments, and private sector partners, has developed the National Infrastructure Protection Plan (NIPP) to establish a framework for securing our resources and maintaining their resilience from all hazards during an event or emergency. (Council Administrative Notice Item No. 10 - Barack Obama Presidential Proclamation 8460, Critical Infrastructure Protection)
32. Pursuant to the tower sharing policy of the State of Connecticut under C.G.S. §16-50aa, if the Council finds that a request for shared use of a facility by a municipality or other person, firm, corporation or public agency is technically, legally, environmentally and economically feasible, and the Council finds that the request for shared use of a facility meets public safety concerns, the Council shall issue an order approving such shared use to avoid the unnecessary proliferation of towers in the state. (Conn. Gen. Stat. §16-50aa)

Existing and Proposed Wireless Coverage

33. AT&T's proposed facility would initially provide 850 MHz (cellular) and 1900 MHz (PCS) service. 700 MHz (LTE) service would likely be provided at the site in the future. (AT&T 2, response 5)
34. AT&T designs its system for -82 dBm in-vehicle coverage and -74 dBm in-building coverage. (AT&T 2, response 2)
35. AT&T's existing signal strength in the area that would be covered from either proposed facility ranges from less than -100 dBm to -82 dBm. (AT&T 2, responses 9 and 30)

36. The table below indicates the current coverage gaps along the major routes in the area of its proposed facility.

Street Name	Current Coverage Gap in Miles
Roxbury Rd. (Route 67), Woodbury and Southbury	1.60 miles
Flag Swamp Rd., Roxbury and Southbury	1.39 miles
Squire Rd., Roxbury	1.37 miles
Southbury Rd. (Route 67), Roxbury	1.35 miles
Transylvania Rd., Roxbury	1.31 miles
Patriot Rd., Southbury	1.00 miles
Upper Grassy Hill Rd., Woodbury	0.86 miles
Carriage Dr., Southbury	0.81 miles
Rucum Rd., Roxbury and Woodbury	0.61 miles
Charter Oak Rd., Southbury	0.61 miles
Coachman Dr., Southbury	0.60 miles

(AT&T 2, response 12; Council Administrative Notice Item Nos. 21 and 53; AT&T 1, Tab 1)

37. The table below indicates the distances AT&T would cover along the major routes in the area of its proposed facility at various heights.

Street Name	Site A Coverage with Tower Height of 170 feet	Site A Coverage with Tower Height of 160 feet	Site A Coverage with Tower Height of 150 feet	Site B Coverage with Tower Height of 170 feet	Site B Coverage with Tower Height of 160 feet	Site B Coverage with Tower Height of 150 feet
Roxbury Rd. (Route 67)	1.17 miles	1.17 miles	1.17 miles	0.83 miles	0.83 miles	0.83 miles
Flag Swamp Rd.	0.36 miles	0.28 miles	0.07 miles	0.83 miles	0.72 miles	0.72 miles
Squire Rd.	0.00 miles	0.00 miles	0.00 miles	1.16 miles	1.12 miles	1.12 miles
Southbury Rd. (Route 67)	0.23 miles	0.23 miles	0.23 miles	1.35 miles	1.16 miles	1.16 miles
Transylvania Rd.	1.31 miles					
Patriot Rd.	1.00 miles	1.00 miles	1.00 miles	0.50 miles	0.43 miles	0.43 miles
Upper Grassy Hill Rd.	0.86 miles					
Carriage Dr.	0.81 miles	0.81 miles	0.81 miles	0.77 miles	0.73 miles	0.75 miles
Rucum Rd.	0.61 miles					
Charter Oak Rd.	0.61 miles					
Coachman Dr.	0.60 miles					

(AT&T 2, responses 13 and 34)

38. The table below indicates the total areas AT&T would cover from the proposed facilities at various heights.

Signal Strength	Coverage Area at Site A with Tower Height of 170 feet	Coverage Area at Site B with Tower Height of 170 feet
≤ -82 dBm*	12.94 square miles	14.21 square miles

Signal Strength	Coverage Area at Site A with Tower Height of 160 feet	Coverage Area at Site B with Tower Height of 160 feet
≤ -82 dBm*	12.72 square miles	14.13 square miles

Signal Strength	Coverage Area at Site A with Tower Height of 150 feet	Coverage Area at Site B with Tower Height of 150 feet
≤ -82 dBm*	12.55 square miles	14.06 square miles

*This is the signal strength AT&T considers generally sufficient to provide service within vehicles, otherwise known as “in-vehicle coverage.”
 (Applicant 2, responses 14 and 35)

39. AT&T’s proposed facility would interact with the adjacent facilities identified in the following table.

Site Location	Distance from Site A Tower	Distance from Site B Tower	Height of AT&T Antennas	Tower Height
35 Lower County Road, Roxbury	3.43 miles	2.49 miles	133 feet	180 feet
478 Good Hill Road, Woodbury	2.96 miles	2.01 miles	124 feet	150 feet
85 Paper Mill Road, Woodbury	4.45 miles	3.66 miles	147 feet	150 feet
103 Great Hollow Road, Woodbury	2.25 miles	2.48 miles	137 feet	140 feet
231 Kettletown Road, Southbury	4.23 miles	5.14 miles	185 feet	195 feet
Horse Fence Hill Road, Southbury	3.90 miles	4.95 miles	154 feet	150 feet
98 Russian Village Road, Southbury	4.61 miles	5.60 miles	131 feet	120 feet

(AT&T 2, responses 18 and 39)

40. If Site A were shifted 100 feet to the north, there would be no difference from a radio frequency coverage perspective. (Tr. 3, p. 12)

41. No other wireless carriers have expressed an interest in co-locating at either site at this time. (Tr. 1, p. 39)

Site Selection

- 42. AT&T established a search ring for the target service area on February 26, 2008. (AT&T 2, response 3)
- 43. The center of the search ring is located at 41 degrees 31 minutes 45.70 seconds north latitude and 73 degrees 16 minutes 13.10 seconds west longitude. The original search ring was approximately two miles in diameter. (AT&T 2, response 3)
- 44. Three existing telecommunications towers are located within four miles of the center of AT&T's search ring. AT&T has antennas on all three of these facilities, but none of these would be able to provide adequate service needed in the area that AT&T is seeking to cover.

Site Location	Distance from Site A Tower	Distance from Site B Tower	Height of AT&T Antennas	Tower Height
35 Lower County Road, Roxbury	3.43 miles	2.49 miles	133 feet	180 feet
478 Good Hill Road, Woodbury	2.96 miles	2.01 miles	124 feet	150 feet
103 Great Hollow Road, Woodbury	2.25 miles	2.48 miles	137 feet	140 feet

(AT&T 1, Tab 1, Radio Frequency Engineering Report, p. 6; AT&T 2, responses 18 and 39)

- 45. AT&T further analyzed the 35 Lower County Road site as an alternative. AT&T found that, even at 1,200 feet tall, the Lower County Road site would just start to be sufficient to fill the coverage gap. (Tr. 1, p. 50)
- 46. AT&T also investigated other existing tower locations in Southbury such as Swamp Road, Upper Fish Rock Road, and Lakeside Road, but none met the coverage objectives. (Tr. 1, p. 22)
- 47. The tower approved by the Council in Docket No. 383 for 316 Perkins Road, Southbury is not a viable site because the property entered foreclosure, and the tower will not be built. (Tr. 1, p. 22; Administrative Notice Item No. 21)
- 48. AT&T investigated 16 raw land sites as possible locations. These properties and the determinations of their suitability are listed below.
 - a. Errico Property Site #1 – AT&T rejected this site because it does not meet coverage objectives.
 - b. Errico Property Site #2 – AT&T rejected this site because it does not meet coverage objectives.
 - c. Errico Property Site #3 – AT&T rejected this site because it does not meet coverage objectives.
 - d. Errico Property Site #4 – This is proposed Site B.
 - e. Wilder Property #1 – Due to sloping topography, the tower would have to be located near the property boundary, thus eliminating the screening opportunities of larger undeveloped parcels. A higher tower would be required, but would still provide less coverage than a tower at Sites A or B. Thus, AT&T rejected this site.
 - f. Wilder Property #2 - AT&T rejected this site for the same reasons as Wilder #1.
 - g. Bronson Mountain Road – AT&T rejected this site because a deed restriction precludes the construction of a tower.
 - h. High Meadow Road – AT&T rejected this site because the property owner was no longer interested.

- i. Route 67 – This is proposed Site A.
 - j. Church at Route 67 and Route 172 in Southbury – AT&T rejected this site because of the small property size, existing wetlands, visibility, and insufficient ground space for multiple carriers.
 - k. Fishchetti – AT&T rejected this site because it does not meet coverage objectives.
 - l. East Swamp – AT&T rejected this site because it does not meet coverage objectives.
 - m. Weinburg Property – AT&T rejected this site because the owner was not interested.
 - n. Van Saun Property – AT&T rejected this site because the owner was not interested.
 - o. Cartagena Property – AT&T rejected this site because it does not meet coverage objectives.
 - p. Secor Property – AT&T rejected this site because it does not meet coverage objectives.
(AT&T 1, Tab 2)
49. During this proceeding, AT&T also reviewed Town-owned property on Squire Road as a possible site. This site does not meet coverage objectives. (Tr. 1, pp. 22-23)
50. Repeaters, microcell transmitters, distributed antenna systems, and other types of technologies are not a practicable or feasible means of providing service within the coverage objective area, and there are no effective technological alternatives to the construction of a new tower. (AT&T 1, p. 11)

Site A Facility Description – Route 67

51. Site A is located on a 96.5-acre parcel. The property is owned by C.N. Builders. (See Figures 1 and 2.) (AT&T 1, p. 13)
52. The proposed Site A tower would be located at 41° 30' 53.83" north latitude and 73° 15' 46.12" west longitude. Its ground elevation would be 723 feet above mean sea level (amsl). (AT&T 1, Tab 3 and 3B)
53. Land use in the proximity of Site A includes residential and undeveloped wooded lots to the south, Route 67 to the east, woods and agricultural fields to the north, and forested land to the west. (AT&T 2, response 19)
54. Site A is located within the Residence Zone C, which is a residential zone. (AT&T 1, p. 14; AT&T 1b, p. 11; Tr. 3, p. 68)
55. AT&T would locate its Site A facility within the south-central portion of the subject property. AT&T would lease a 100-foot by 100-foot parcel, within which it would develop a 75-foot by 75-foot compound that would include a 170-foot tall monopole tower and a 12-foot by 20-foot equipment shelter. The compound would be surfaced with gravel and enclosed by an eight-foot high chain link fence without barbed wire. (AT&T 1, p. 2 and Tab 3; Tr. 1, p. 24)
56. The proposed Site A tower would be designed in accordance with the American National Standards Institute TIA/EIA-222-F "Structural Standards for Steel Antenna Towers and Antenna Support Structures" and the 2003 International Building Code with the 2005 Connecticut Amendment. The basic wind speed for Roxbury is 95 miles per hour. (AT&T 2, response 8)
57. The monopole would have a diameter of approximately 4.5 feet at its base and approximately 2 feet at its top. (AT&T 1, Tab 3)
58. At its proposed height of 170 feet, AT&T's tower could accommodate three additional wireless carriers. (AT&T 1, Tab 3A)

59. AT&T would deploy up to 12 panel antennas and up to 12 tower mounted amplifiers on a low-profile platform at a centerline height of 167 feet AGL. (AT&T 1, p. 14 and Tabs 3 and 3A)
60. AT&T could use T-arm mounts without compromising coverage. (AT&T 2, response 17)
61. For backup power, AT&T would rely on a diesel generator. The 210 gallon fuel tank would provide approximately 48 hours of run time. (AT&T 2, response 24)
62. AT&T would also have a battery backup to prevent the facility from experiencing a “re-boot” condition during the generator start-up period. (AT&T 2, response 24)
63. Approximately 410 cubic yards of cut and approximately 385 cubic yards of fill would be required to develop the proposed Site A tower site and the AT&T portion of the access drive. (AT&T 2, response 23)
64. The presence of ledge is not expected during site excavation, but would be confirmed upon completion of a geotechnical investigation. If ledge is encountered, removal by mechanical means would first be attempted. If mechanical removal methods are not successful, blasting would be utilized as required to remove the ledge. (AT&T 2, response 26)
65. Vehicular access to the proposed facility would initially be provided over a planned access driveway for the property owner. This access driveway would extend from Route 67 for a distance of 1,300 feet. From there, AT&T proposes a new 12-foot wide gravel access drive that would extend approximately 210 feet to the site. (AT&T 1, p. 2; AT&T 1, Tab 3, p. 3; AT&T 5, response 5)
66. AT&T’s development is limited to the compound and access connecting to the property owner’s future access drive that would serve the parcel. (AT&T 5, response 6)
67. The property owner has independently obtained ConnDOT approval for the driveway to provide ingress and egress from the subject property and Route 67. The property owner also obtained approval from the Town of Roxbury Inland Wetland Commission to construct a crossing over a stream and an access drive into the parcel. (AT&T 1, p. 13)
68. The Town of Roxbury Inland Wetlands Commission permit notes that the stream crossing on Southbury Road would be “to access a possible cell tower site.” (BMFHA Administrative Notice Item No. 2, Tab 1)
69. AT&T is not aware of any construction of the property owner’s access at this time. However, negotiations with AT&T have committed the property owner to building the access road if Site A is approved. (Tr. 1, pp. 45-46; AT&T 14, response 3)
70. The AT&T portion of the access would have an approximately four percent grade. (Tr. 1, p. 39)
71. If the tower were shifted 100 feet to the north, the AT&T portion of the access drive would shorten by approximately 100 feet in length. (Tr. 3, p. 12)
72. The property owner of Site A would allow AT&T to shift the tower location 100 feet to the north. (AT&T 13, p.2)

73. Utility service for the proposed facility would be extended underground from a new riser pole on Route 67 and would generally follow the property owner's planned access drive and AT&T's proposed access drive. (AT&T 1, Tab 3A)
74. The setback radius of the proposed tower would extend approximately 53 feet onto the Naugatuck Savings Bank property Tax Map ID # 32-026 to the south of the proposed tower. The tower could be designed with a yield point to ensure that the setback radius remains within the boundaries of the subject property. Alternatively, shifting the tower 100 feet to the north would ensure that the tower setback radius remains within the subject property boundaries. (AT&T 1, Tab 3A; AT&T 2, response 22)
75. One residence (not on the subject property) is located within 1,000 feet of the proposed Site A facility, approximately 970 feet southeast. (AT&T 1, Tab 3A)
76. The estimated construction cost of the proposed facility is:

Tower and foundation	\$100,000.
Site development costs	\$100,000.
Utility installation	\$90,000.
Facility installation	\$95,000.
<u>Antennas and equipment</u>	<u>\$250,000.</u>
Total	<u>\$635,000.</u>

(AT&T 1, p. 24)

Site B Facility Description – 126 Transylvania Road

77. Site B is located on a 21.02-acre parcel. The property is owned by Rita L. Errico. (See Figures 1 and 2.) (AT&T 1, Tab 4)
78. The proposed tower would be located at 41° 31' 46.08" north latitude and 73° 16' 00.27" west longitude. Its ground elevation would be 822 feet above mean sea level (amsl). (AT&T 1, Tab 4 and 4B)
79. Land use in the proximity of Site B is rural residential development and forested land. (AT&T 2, response 40)
80. Site B is located within the Residence Zone C, which is a residential zone. (AT&T 1, p. 15; AT&T 1b, p. 11; Tr. 3, p. 68)
81. AT&T would locate its proposed facility within the south-central portion of the subject property. AT&T would lease a 100-foot by 100-foot parcel, within which it would develop a 75-foot by 75-foot compound that would include a 170-foot tall monopole tower and a 12-foot by 20-foot equipment shelter. The compound would be surfaced with gravel and enclosed by an eight-foot high chain link fence with barbed wire. (AT&T 1, p. 2 and Tab 4; Tr. 1, pp. 23-24)

82. The proposed tower would be designed in accordance with the American National Standards Institute TIA/EIA-222-F “Structural Standards for Steel Antenna Towers and Antenna Support Structures” and the 2003 International Building Code with the 2005 Connecticut Amendment. The monopole would have a diameter of approximately 4.5 feet at its base and approximately 2 feet at its top. (AT&T 1, Tab 4)
83. At its proposed height of 170 feet, AT&T’s tower could accommodate three additional wireless carriers. (AT&T 1, Tab 4A)
84. AT&T would deploy up to 12 panel antennas and 12 tower mounted amplifiers on a low-profile platform at a centerline height of 167 feet AGL. (AT&T 1, pp. 2, 15 and Tabs 3 and 3A)
85. AT&T could use T-arm mounts without compromising coverage. (AT&T 2, responses 17 and 38)
86. For backup power, AT&T would rely on a diesel generator. The 210 gallon fuel tank would provide approximately 48 hours of run time. (AT&T 2, response 43)
87. AT&T would also have a battery backup to prevent the facility from experiencing a “re-boot” condition during the generator start-up period. (AT&T 2, response 43)
88. Approximately 68 cubic yards of cut and approximately 78 cubic yards of fill would be required to develop the proposed Site B tower site and access drive. (AT&T 2, response 42)
89. The presence of ledge is not expected during site excavation, but would be confirmed upon completion of a geotechnical investigation. If ledge is encountered, removal by mechanical means would first be attempted. If mechanical removal methods are not successful, blasting would be utilized as required to remove the ledge. (AT&T 2, response 45)
90. Vehicular access to Site B would be provided over a portion of existing approximately 330-foot asphalt driveway and then over an approximately 600-foot long and 12-foot wide new gravel access road to the proposed tower compound. (AT&T 1, p. 2; Tr. 3, p. 19)
91. The Site B access would vary in its grading to match existing topography. When leaving the existing driveway, the grade would begin at 12 percent. Then, there would be a short run of approximately 80 feet with up to 24 percent grade. From there, the grade would decrease to approximately 12 percent and finally to 9 percent for the remaining distance. (Tr. 1, p. 40)
92. Utility service for the proposed facility would be extended underground from a new pole on the subject property and would generally follow the existing access drive. (AT&T 1, Tab 3A)
93. The setback radius of the proposed tower would remain within the boundaries of the subject property. (AT&T 1, Tab 3A; AT&T 2, response 22)
94. There are ten off-site residences within 1,000 feet of the proposed Site B tower. (Tr. 1, p. 41)
95. The nearest residence (not on the subject property) is owned by John and Margaret Ambruso and is located at 118 Transylvania Road, approximately 460 feet southwest of the proposed Site B facility. (AT&T 1, Tab 4A)

96. The estimated construction cost of the proposed facility is:

Tower and foundation	\$100,000.
Site development costs	\$200,000.
Utility installation	\$90,000.
Facility installation	\$95,000.
<u>Antennas and equipment</u>	<u>\$250,000.</u>
Total	<u>\$735,000.</u>

(AT&T 1, p. 24)

Environmental Considerations

97. Development of Site A or Site B would have no adverse effect on historic, architectural or archaeological resources listed in or eligible for the National Register of Historic Places. (AT&T 1, Tabs 3B and 4B)

98. A State-designated species of special concern, the Eastern Box Turtle, occurs in the vicinity of Sites A and B. (AT&T 1, Tabs 3D and 4D)

99. The Eastern Box Turtle is dormant from November 1 through April 1, so work should be done outside of those seasons. If work must be performed at either Site A or Site B in Box Turtle habitat during the turtle's active period (April 1 through November 1), the following precautionary measures are recommended to protect the turtles:

- a) Silt fencing shall be installed around the work area prior to construction;
- b) After silt fencing is installed and prior to construction, a sweep of the work area shall be conducted to look for turtles;
- c) Workers shall be apprised of the possible presence of turtles, and provided with a description of the species;
- d) Any turtles that are discovered shall be moved, unharmed, to an area immediately outside of the fenced area, and positioned in the same direction that it was walking when found;
- e) No vehicles or heavy machinery shall be parked in any turtle habitat;
- f) Work conducted during early morning and evening hours shall occur with special care not to harm basking or foraging turtles; and
- g) All silt fencing shall be removed after work is completed and soils are stable so that reptile and amphibian movement between uplands and wetlands is not restricted.

(AT&T 1, Tab 4D – DEEP letter dated May 10, 2012)

100. AT&T has a mitigation plan that would be used in Eastern Box Turtle protection areas, and it addresses the precautionary measures described in FOF #88. (AT&T 1, Tab 3D)

101. Standard protocols for protection of wetlands would be followed and maintained during the course of the project. (AT&T 1, Tab 3D)

102. The facilities proposed at both sites would comply with the recommendations of the U.S. Fish and Wildlife Service guidelines for minimizing the potential for telecommunications towers to impact bird species. (AT&T 2, responses 28 and 47)

103. There are no Important Bird Areas (IBA), as designated by the National Audubon Society, proximate to either tower site. The nearest IBA is Good Hill Farm Preserve, located approximately 2.25 miles northwest of Site A or 1.25 miles northwest of Site B. (AT&T 2, responses 27 and 46)

104. The number of trees with a diameter of six inches or more at breast height that would be removed for the construction of the facilities is listed below.

Site	Number of trees to be removed
Site A	122*
Site B	68

*This includes AT&T's access and also underground utilities. It does not include the property owner's access.

(AT&T 1, Tab 3A; AT&T 3, response 9; Tr. 3, p. 13)

105. The number of additional trees that would have to be removed to construct the property owner's access for Site A is on the order of 75. (Tr. 3, pp. 39-40)

106. The distance and direction to the nearest wetlands from the proposed project area of each site is listed below.

Site	Distance and direction to nearest wetland
Site A	97 feet to the east
Site B	295 feet to the east

(AT&T 1, Tabs 3A and 4A; AT&T 3, response 5)

107. At Site B, one potential vernal pool was identified in the far eastern portion of the subject property, approximately 295 feet east of the proposed facility. (AT&T 15b)

108. AT&T's project would not likely result in adverse impact to vernal pool and related terrestrial habitat. However, construction activities have the potential to temporarily impact amphibians traveling through the construction area. As a result, AT&T has Best Management Practices that would be implemented to protect the amphibians. (AT&T 15b)

109. Approximately 2,800 square feet of wetlands would be affected by the construction of the property owner's portion of the access drive for Site A. (BMFHA Administrative Notice Item No. 2, Tab 5)

110. If the Site A tower were shifted 100 feet to the north, there would be no significant difference in the distance to the nearest wetland. (Tr. 3, pp. 12-13)

111. Soil erosion control measures and other best management practices would be established and maintained throughout the construction of either site and would be consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control. (AT&T 1, p. 23; AT&T 5, response 7 and 8)

112. No adverse impact to wetlands and water resources would be anticipated given the distance and precautionary measures. (AT&T 1, p. 23)

113. Neither Site A nor Site B is located within a 100 or 500-year flood zone. (AT&T 1, Tabs 3 and 4)

114. A backup generator at either site would meet applicable noise standards. (Tr. 1, p. 38)

115. Aircraft hazard obstruction marking or lighting of either tower would not be required. (AT&T 1, p. 19; AT&T 1, Tab 4B; AT&T 2, response 21)

116. The cumulative worst-case maximum power density from the radio frequency emissions from the operation of AT&T's proposed antennas at either Site A or B is 5.67% of the standard for Maximum Permissible Exposure, as adopted by the FCC, at the base of the proposed tower. This calculation was based on methodology prescribed by the FCC Office of Engineering and Technology Bulletin No. 65E, Edition 97-01 (August 1997) that assumes all antennas would be pointed at the base of the tower and all channels would be operating simultaneously, which creates the highest possible power density levels. Under normal operation, the antennas would be oriented outward, directing radio frequency emissions away from the tower, thus resulting in significantly lower power density levels in areas around the tower. (AT&T 1, Tabs 3B and 4B)

Visibility

117. The projected visibility of the proposed towers within a two-mile radius of each site is as follows:

Receptor	Site A	Site B
Year-round visibility (acres)	18	68
Additional seasonal visibility (acres)	47	62
Residential properties with year-round views	10	10
Additional residential properties with seasonal views	13	7

(Applicant 1, Tabs 3C and 4C)

118. The visibility of Site A at the proposed height of 170 feet from specific locations within a two-mile radius of the site is presented in the table below.

Location	Approximate visibility at 170 feet	Distance & direction from site
1. 924 Route 67	56 feet above trees	1.1 miles SE
2. 984 Route 67	39 feet above trees	0.99 miles SE
3. Route 67 at Route 172	20 feet above trees	0.95 miles SE
4. Route 172, north of Route 67	39 feet above trees	0.89 miles SE
5. 610 Upper Grassy Hill Road	54 feet above trees	0.74 miles NE
6. 18 Transylvania Road	64 feet through trees	0.35 miles NE
7. Route 172, across from Southbury Training School	8 feet above trees	1.78 miles S
8. 99 Coachmans Drive	23 feet above trees	1.03 miles SE
9. End of Bronson Mountain Road	54 feet above trees	0.18 miles SE

(AT&T 1, Tab 3C)

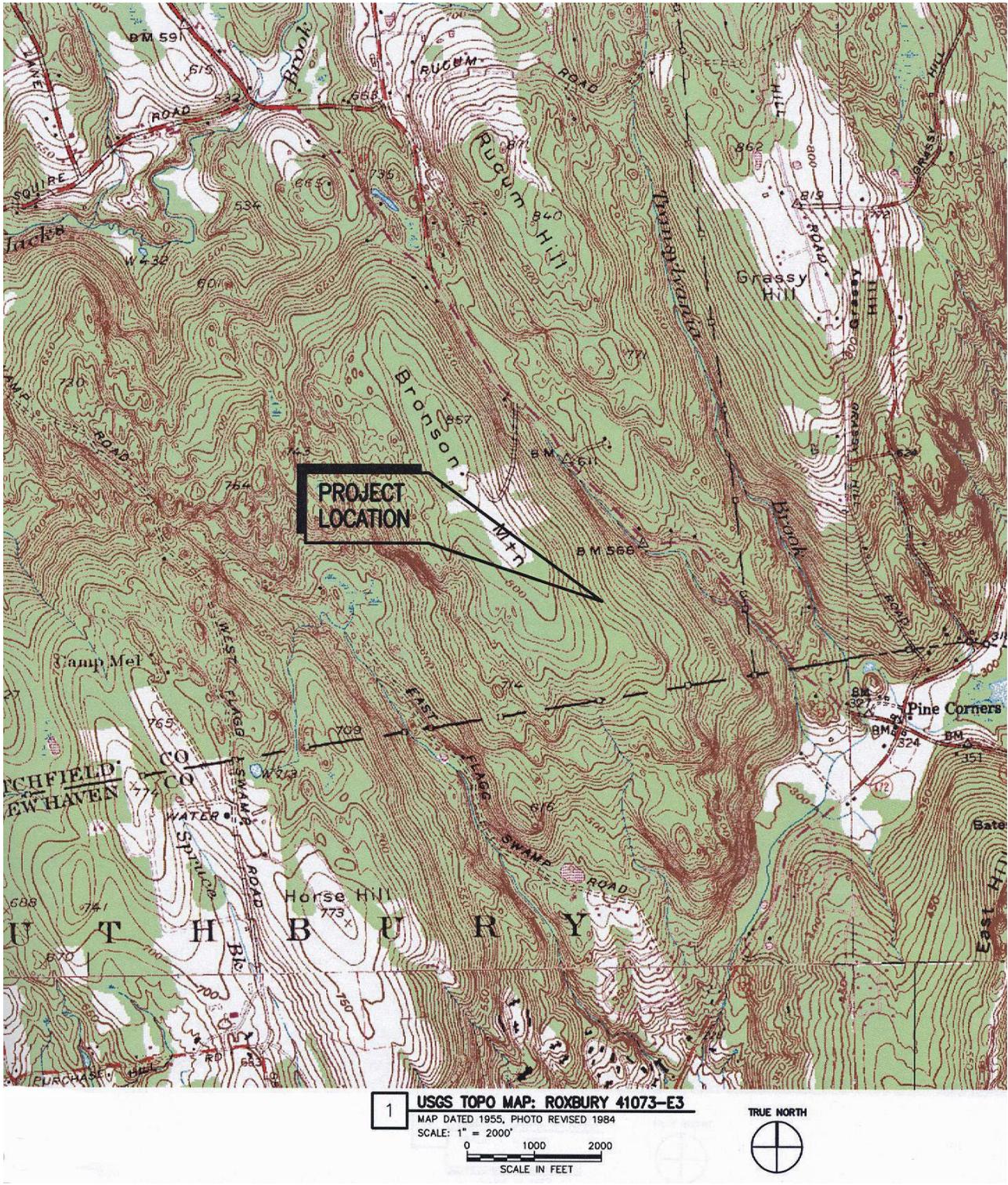
119. The visibility of Site B at the proposed height of 170 feet from specific locations within a two-mile radius of the site is presented in the table below.

Location	Approximate visibility at 170 feet	Distance & direction from site
1. Square Road at Apple Lane	80 feet above trees	1.27 miles NW
2. 65 Grassy Hill Road	80 feet above trees	1.40 miles N
3. Route 67, north of Square Road	22 feet above trees	0.94 miles NW
4. 31 Squire Road	15 feet above trees	1.10 miles NW
5. Route 67 at Crofut Road and Grassy Hill Road	N/A - Not visible	1.71 miles NW
6. Apple Lane	N/A – Not visible	1.69 miles NW
7. 34 Hickory Road	N/A – Not visible	0.24 miles N
8. 141 Bacon Road	N/A – Not visible	0.66 miles NW
9. Grassy Hill Road	N/A – Not visible	0.78 miles NE
10. Route 67 at Bronson Mountain Road	N/A – Not visible	1.30 miles SE
11. Route 67, north of Route 172	N/A – Not visible	1.70 miles SE
12. 126 Transylvania Road	N/A – Not visible	0.12 miles SW
13. 116 Transylvania Road	N/A – Not visible	0.13 miles S

(AT&T 1, Tab 4C)

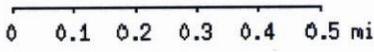
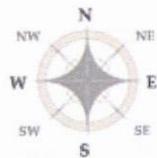
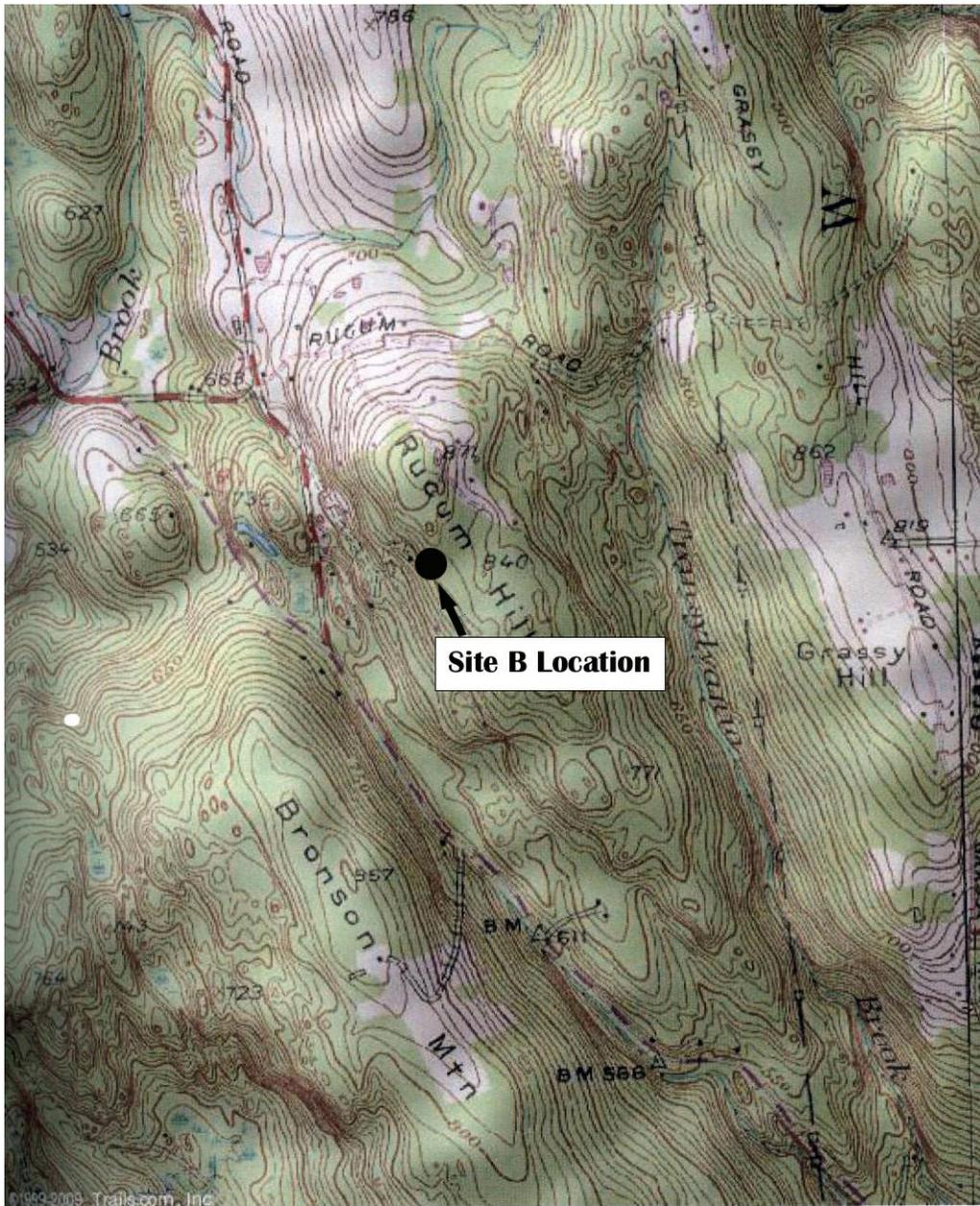
120. Slim-profile options such as flush-mounted antennas or internal antennas within a flagpole would minimize horizontal projections, but would limit the coverage footprint without occupying multiple vertical levels of the tower, resulting in more height above 170 feet required. (AT&T 2, responses 29 and 48)
121. Designing the facility as a monopine or tree tower would provide stealth options while allowing sufficient space for AT&T to install its antennas on a single platform. However, from a visual perspective, this tower style would be significantly more bulky than the style proposed, since faux tree branches would extend up to 30 feet or more horizontally away from the monopole’s centerline. (AT&T 2, responses 29 and 48)
122. If Site A were shifted 100 feet to the north, views of the tower would be approximately the same, although views from the end of Bronson Mountain Road would shift slightly to the right (east). The primary benefit of the shift would be to move it farther from existing properties on Bronson Mountain Road. (Tr. 3, p. 11)

Figure 1: Topographical Map of Site A



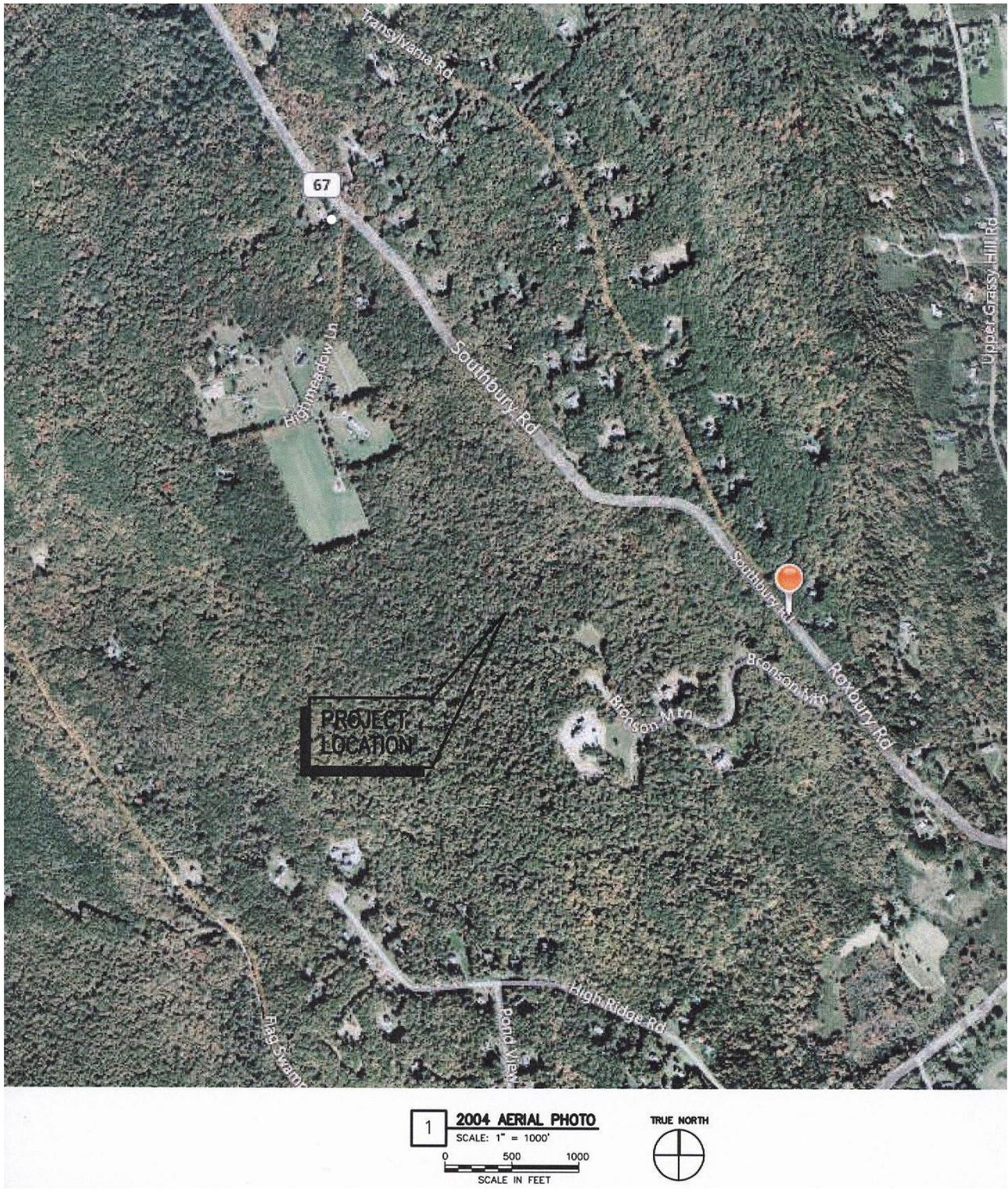
(AT&T 1, Tab 3A)

Figure 2: Topographical Map of Site B



(AT&T 1, Tab 4A)

Figure 3: Aerial Photograph of Site A



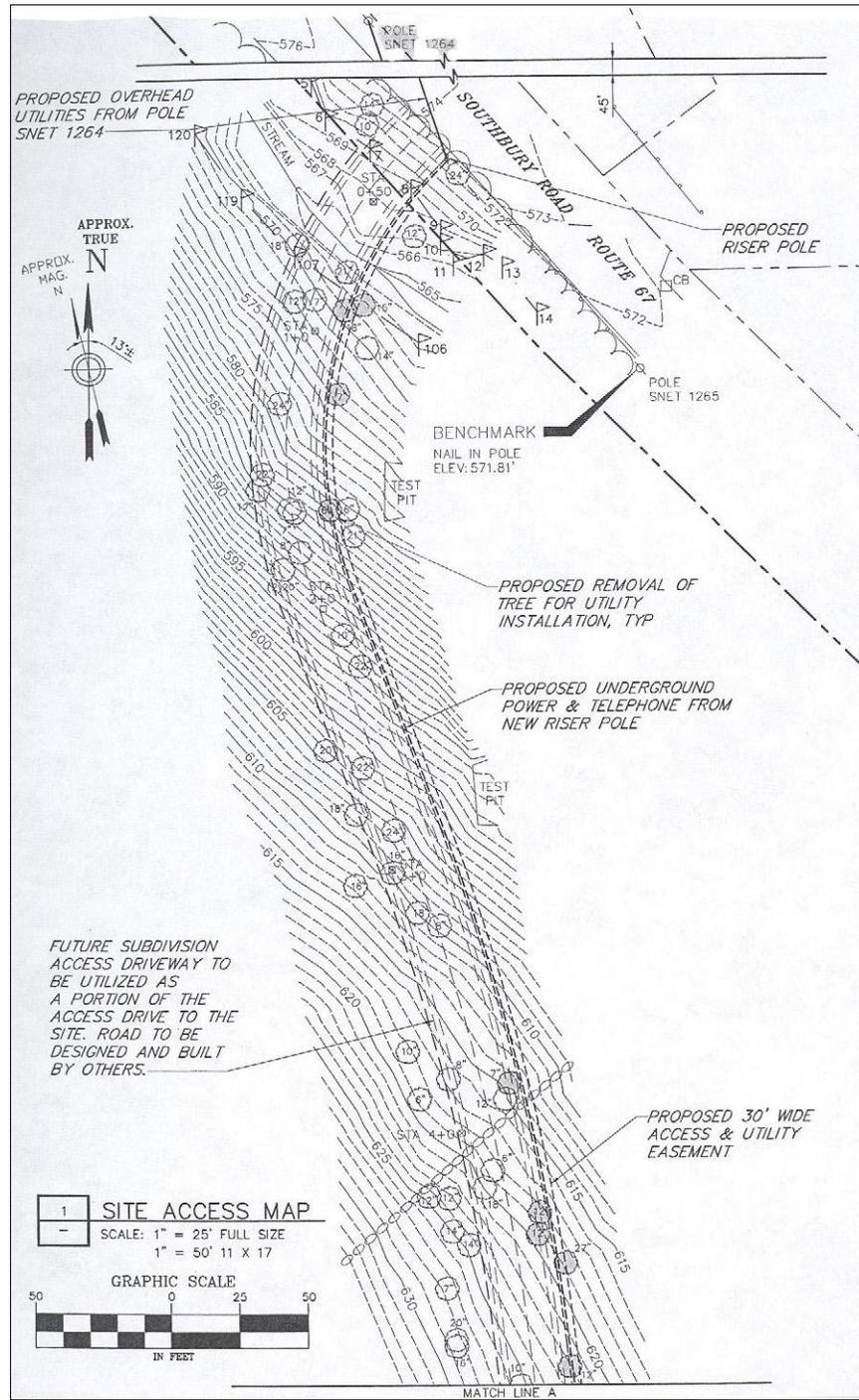
(AT&T 1, Tab 3A)

Figure 4: Aerial Photograph of Site B



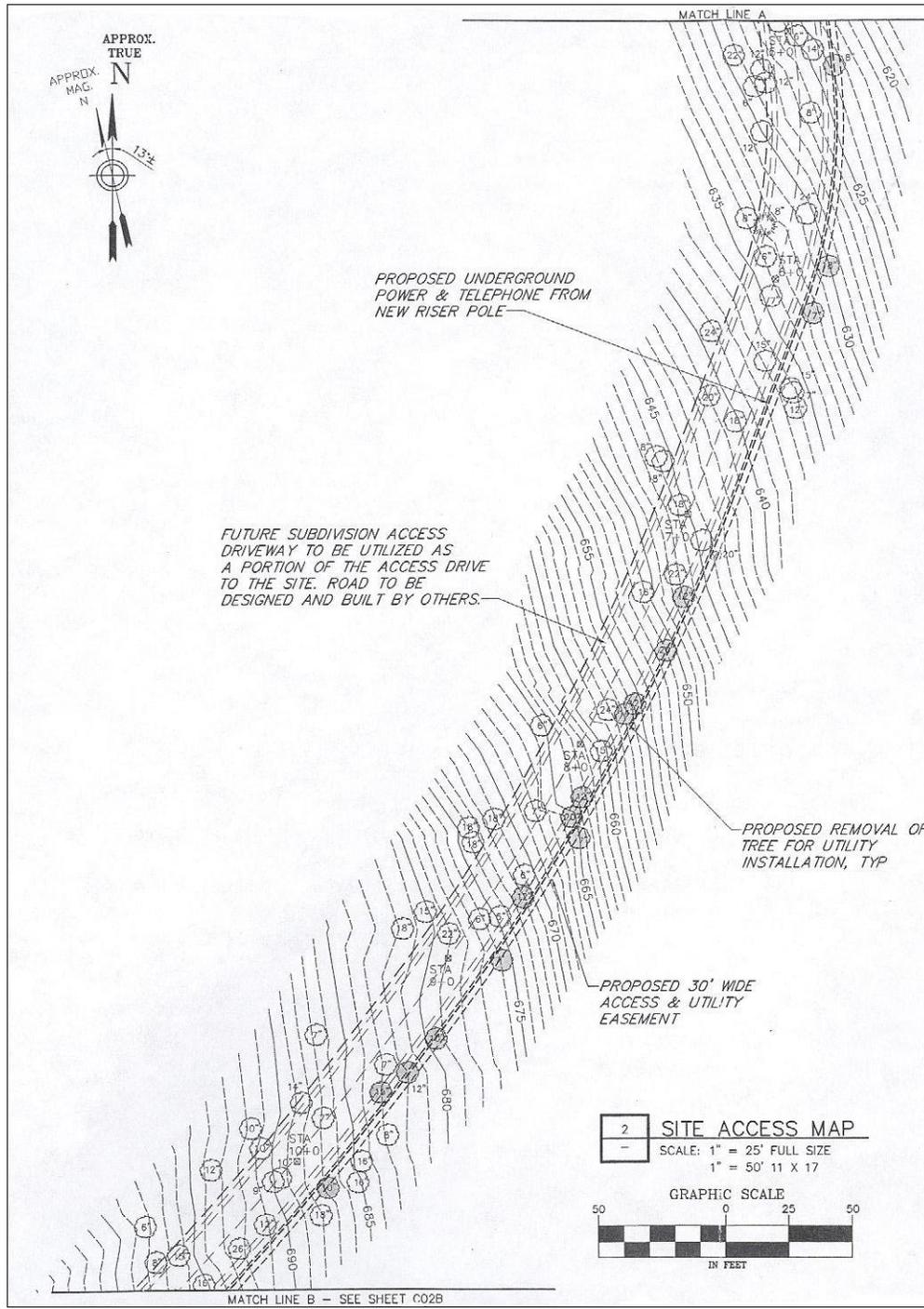
(AT&T 1, Tab 4A)

Figure 5: Site A Access Part 1



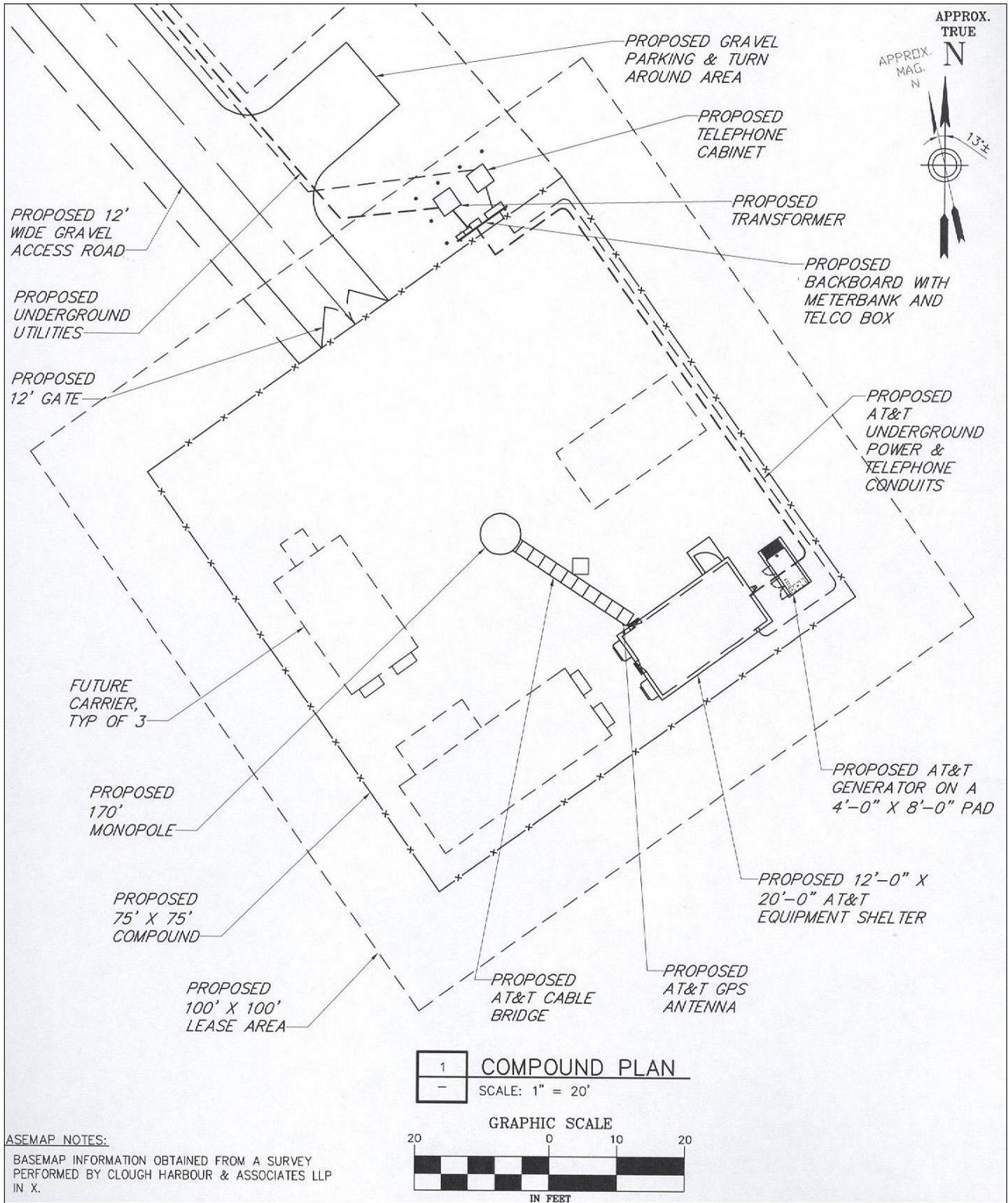
(AT&T 1, Tab 3A)

Figure 6: Site A Access Part 2



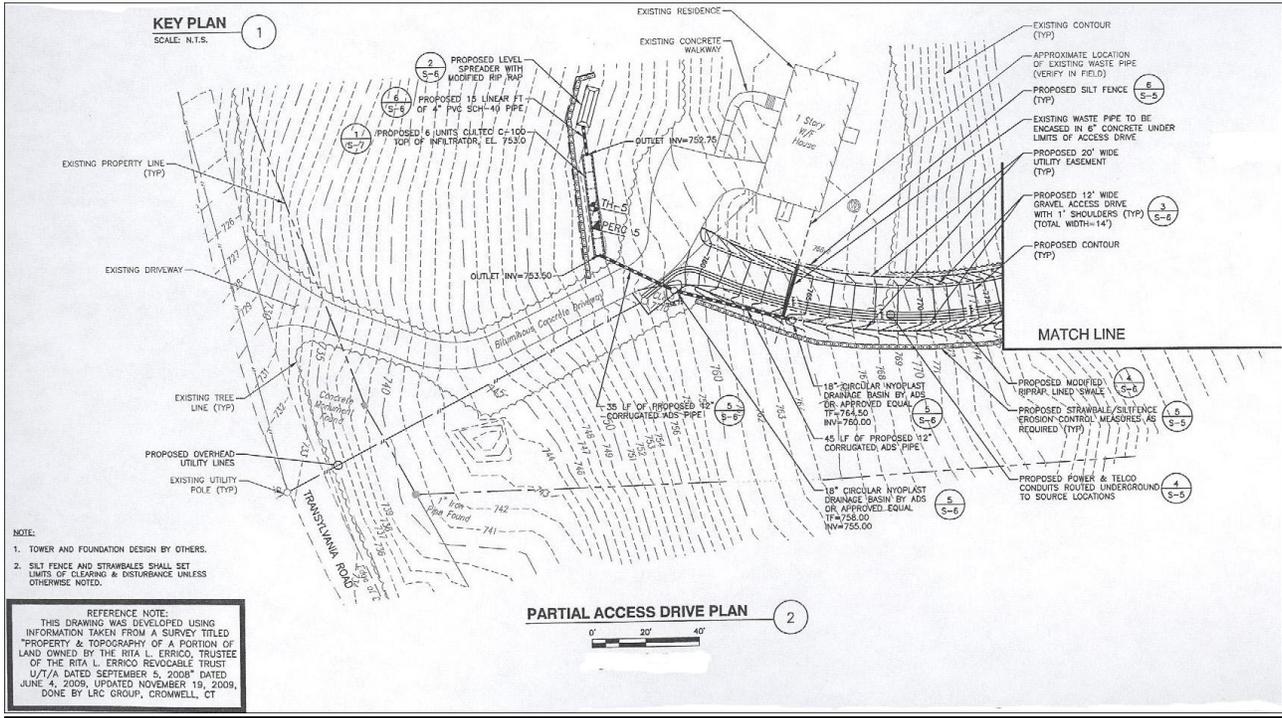
(AT&T 1, Tab 3A)

Figure 7: Site A Compound



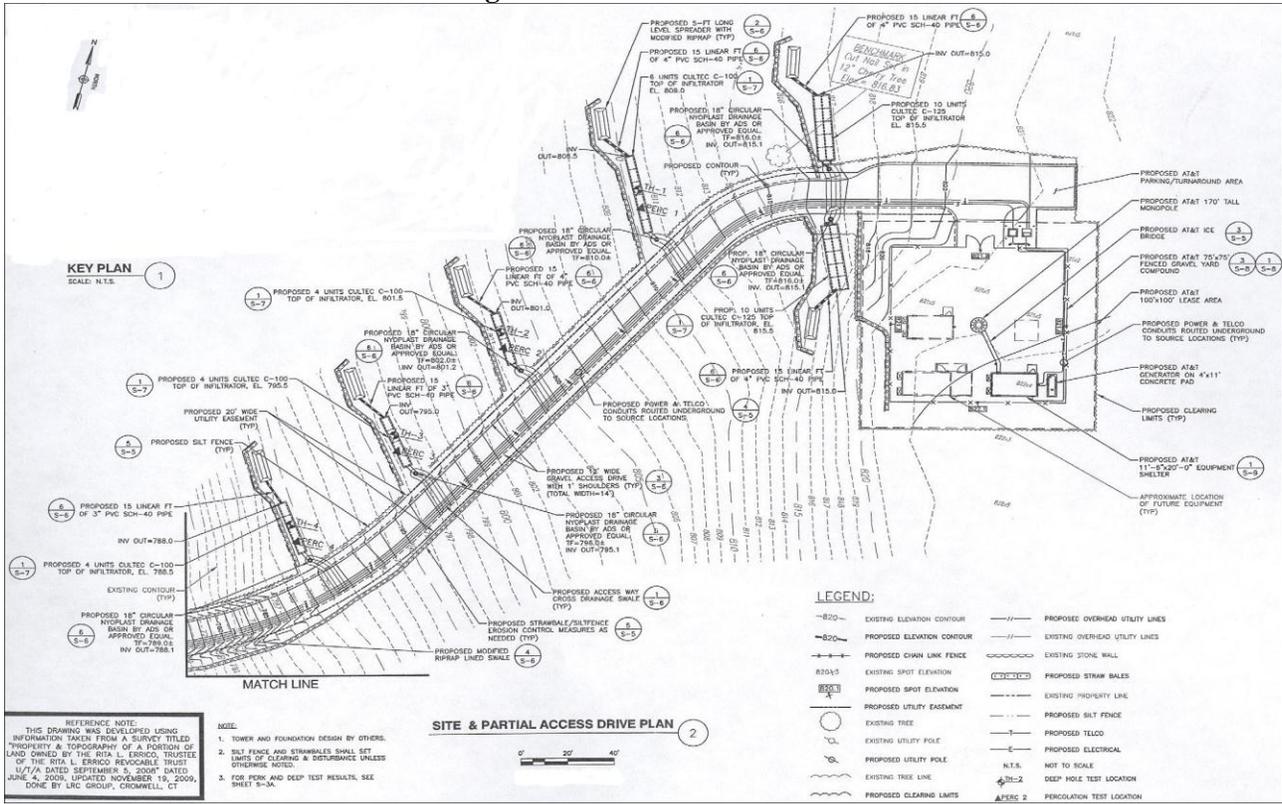
(AT&T 1, Tab 3A)

Figure 8: Site B Access Part 1



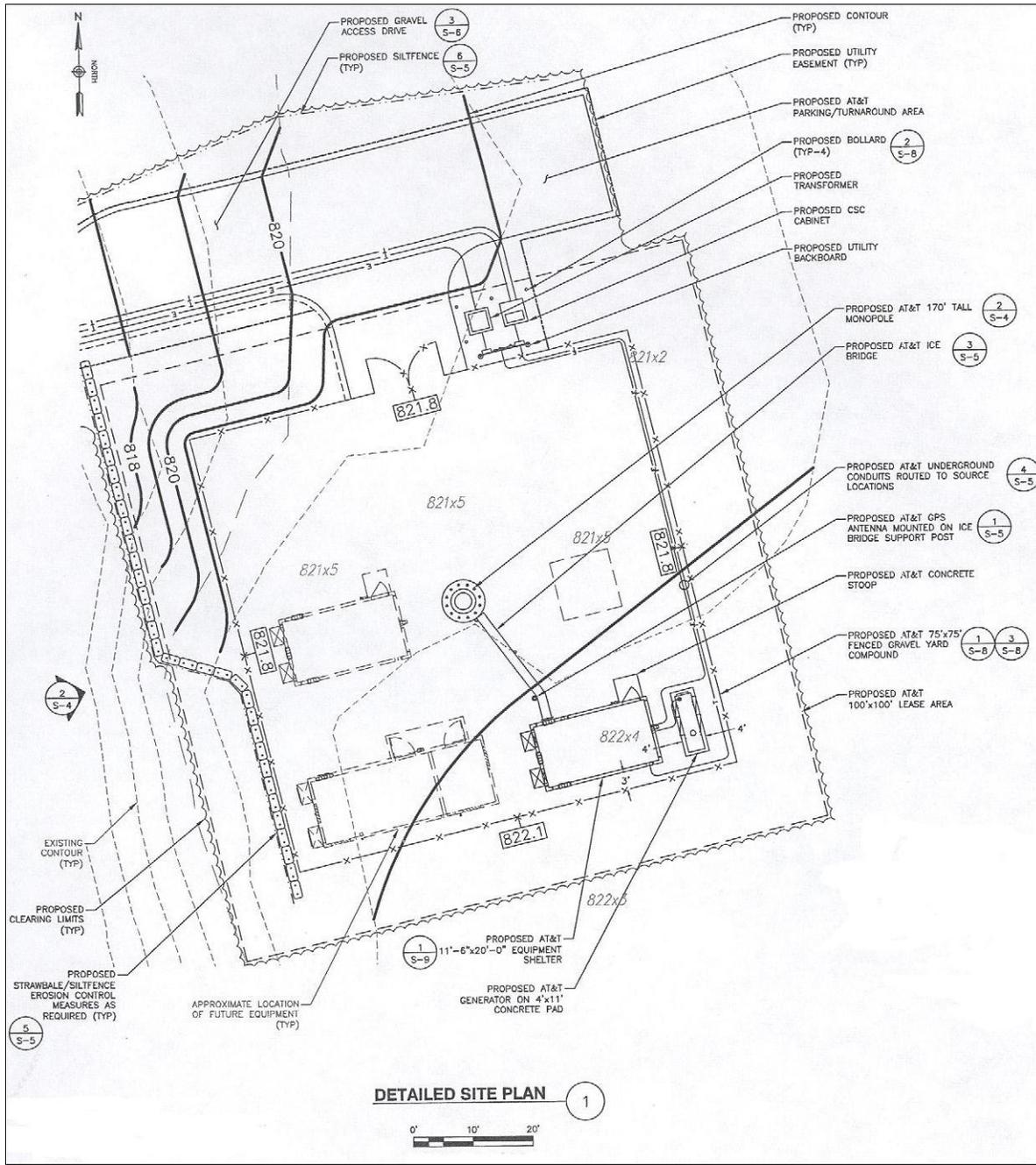
(AT&T 1, Tab 4A)

Figure 9: Site B Access Part 2



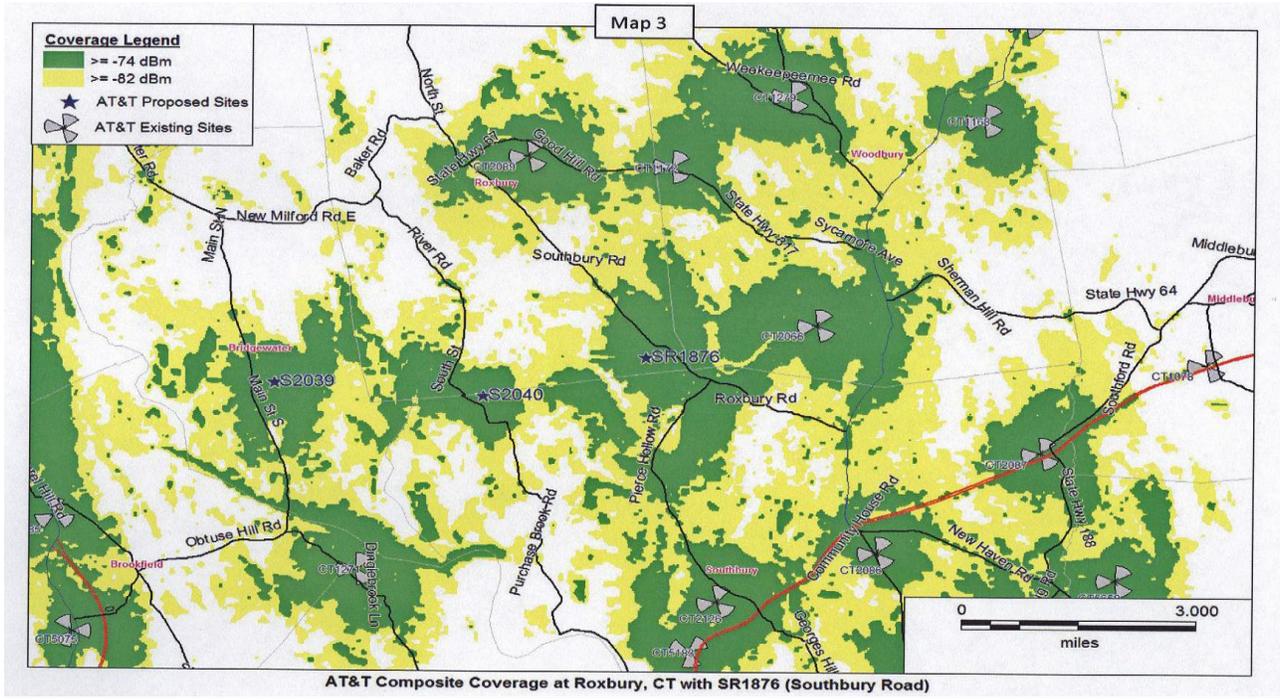
(AT&T 1, Tab 4A)

Figure 10: Site B Compound



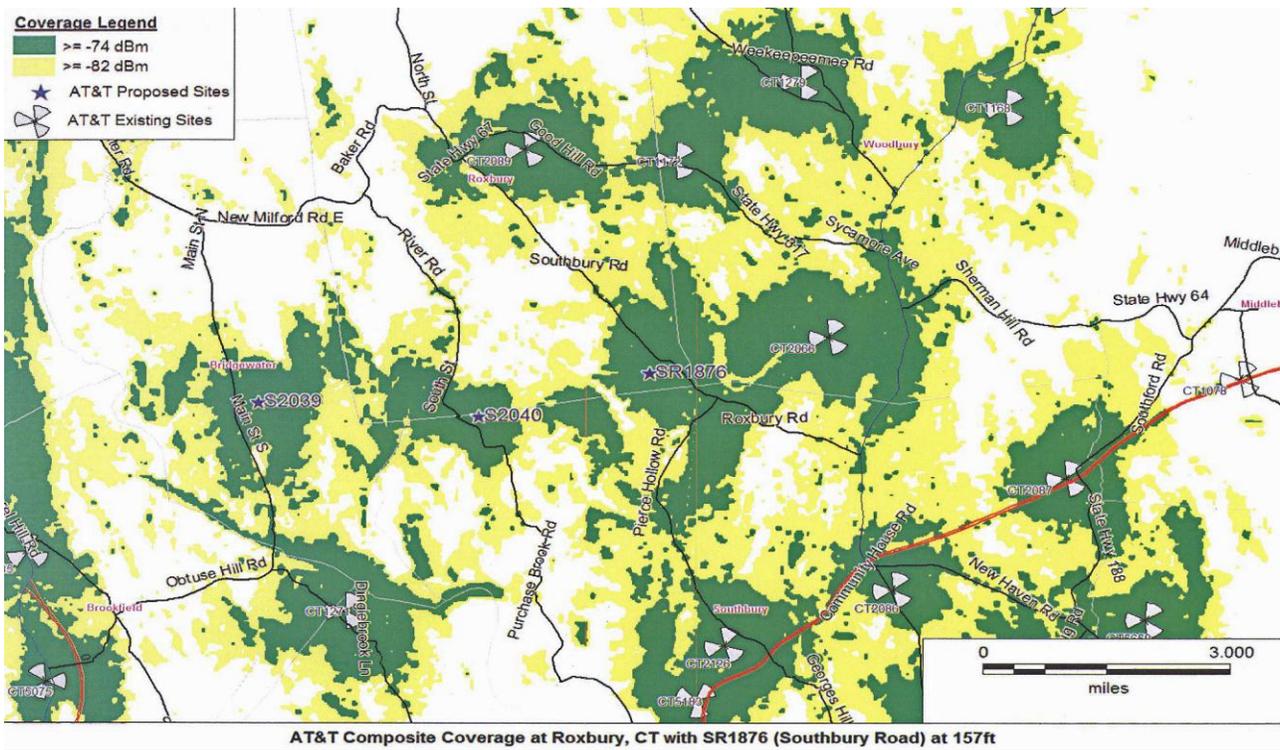
(AT&T 1, Tab 4A)

Figure 12: Site A Coverage at Proposed Antenna Height of 167 feet



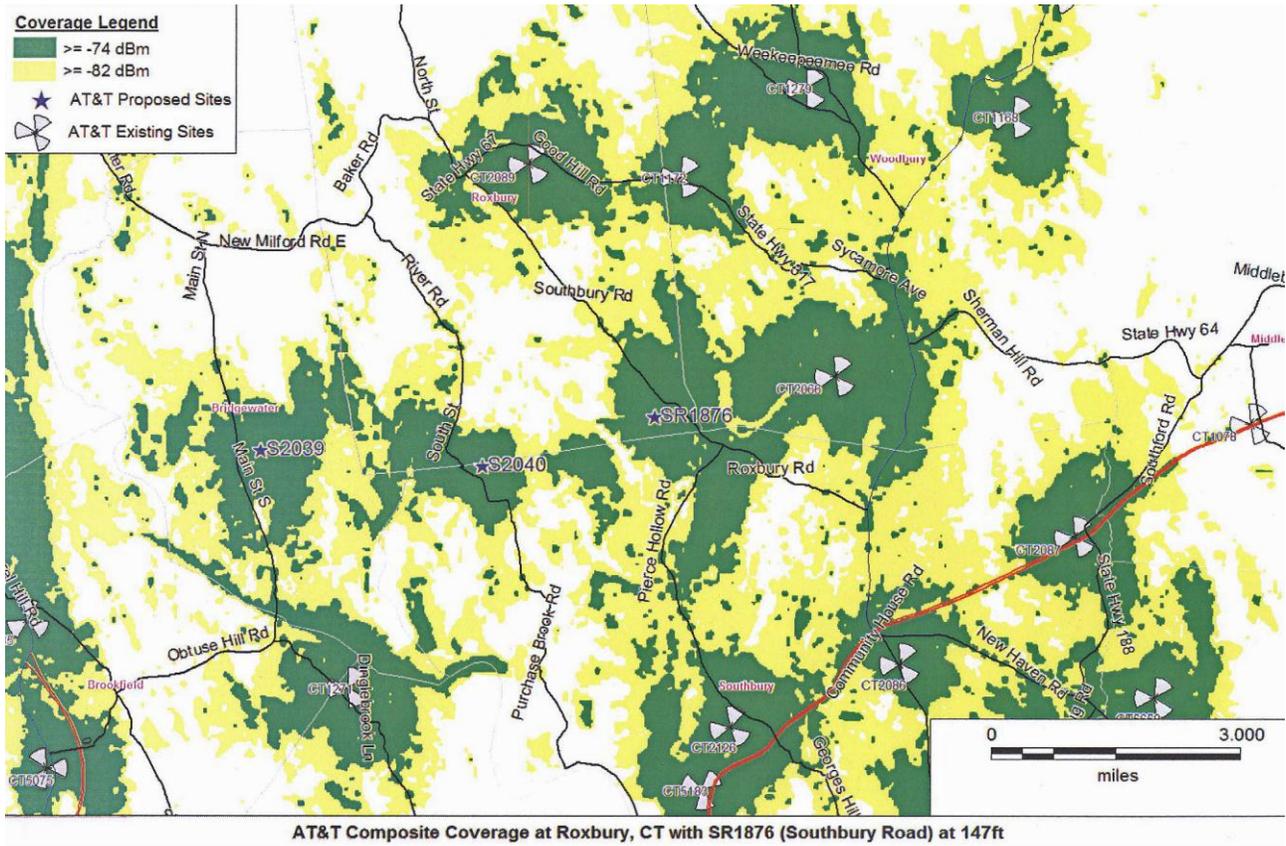
(AT&T 1, Tab 1)

Figure 13: Site A Coverage at Antenna Height of 157 feet



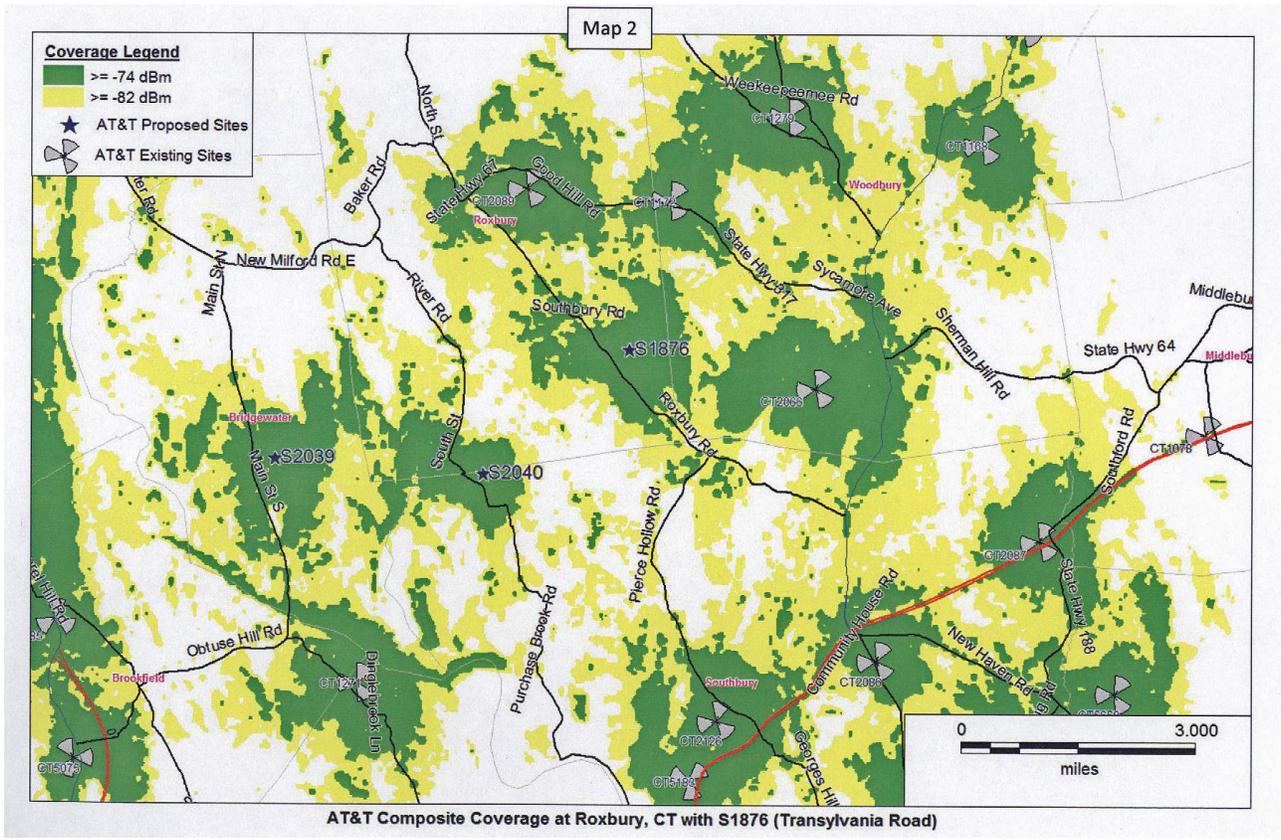
(AT&T 2, response 15)

Figure 14: Site A Coverage at Antenna Height of 147 feet



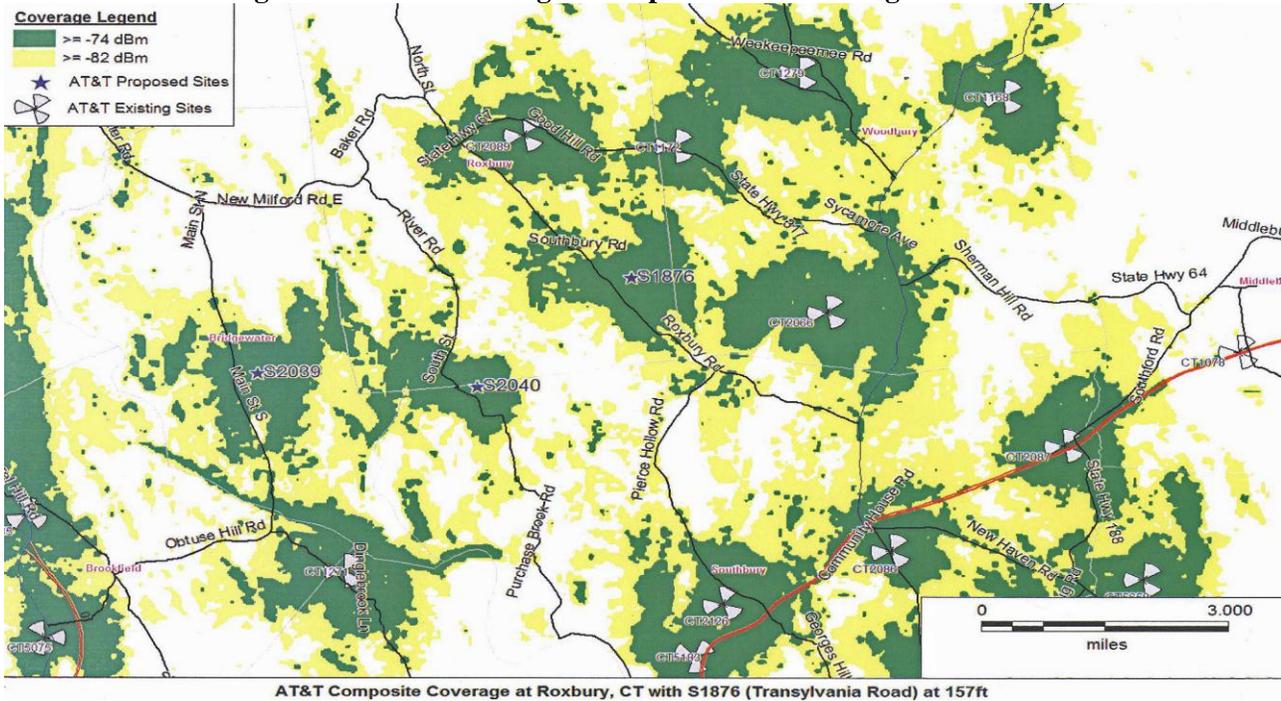
(AT&T 2, response 15)

Figure 15: Site B Coverage at Proposed Antenna Height of 167 feet



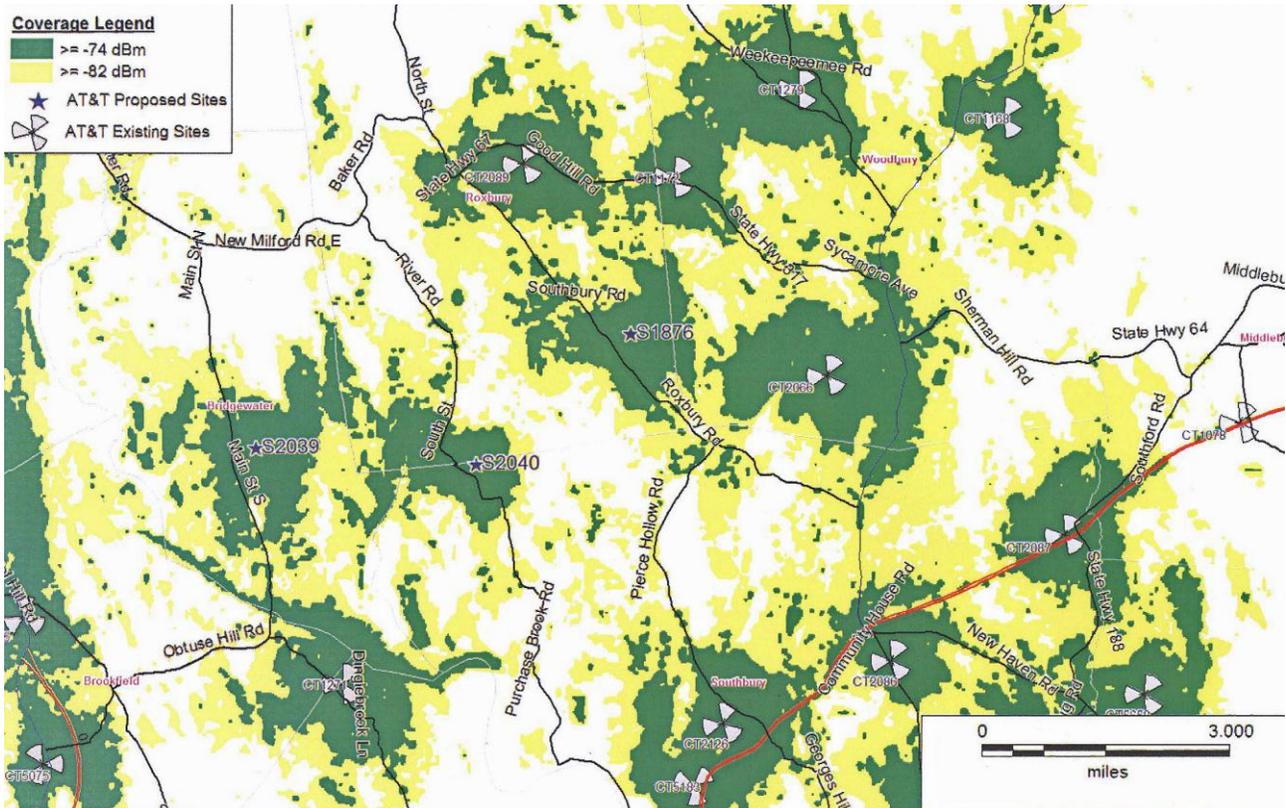
(AT&T 1, Tab 1)

Figure 16: Site B Coverage at Proposed Antenna Height of 157 feet



(AT&T 2, response 36)

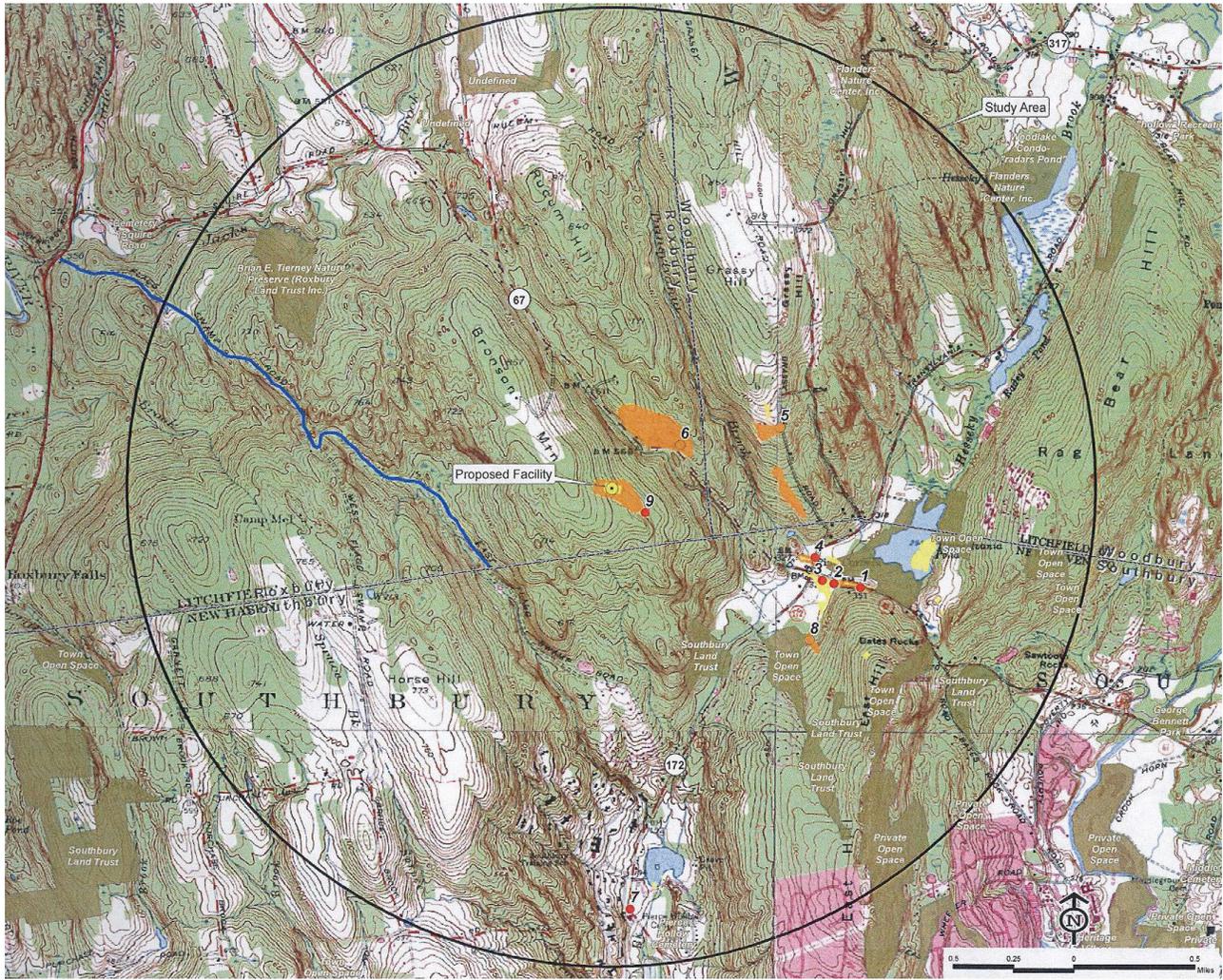
Figure 17: Site B Coverage at Antenna Height of 147 feet



AT&T Composite Coverage at Roxbury, CT with S1876 (Transylvania Road) at 147ft

(AT&T 2, response 36)

Figure 18: Site A Viewshed Map and Key

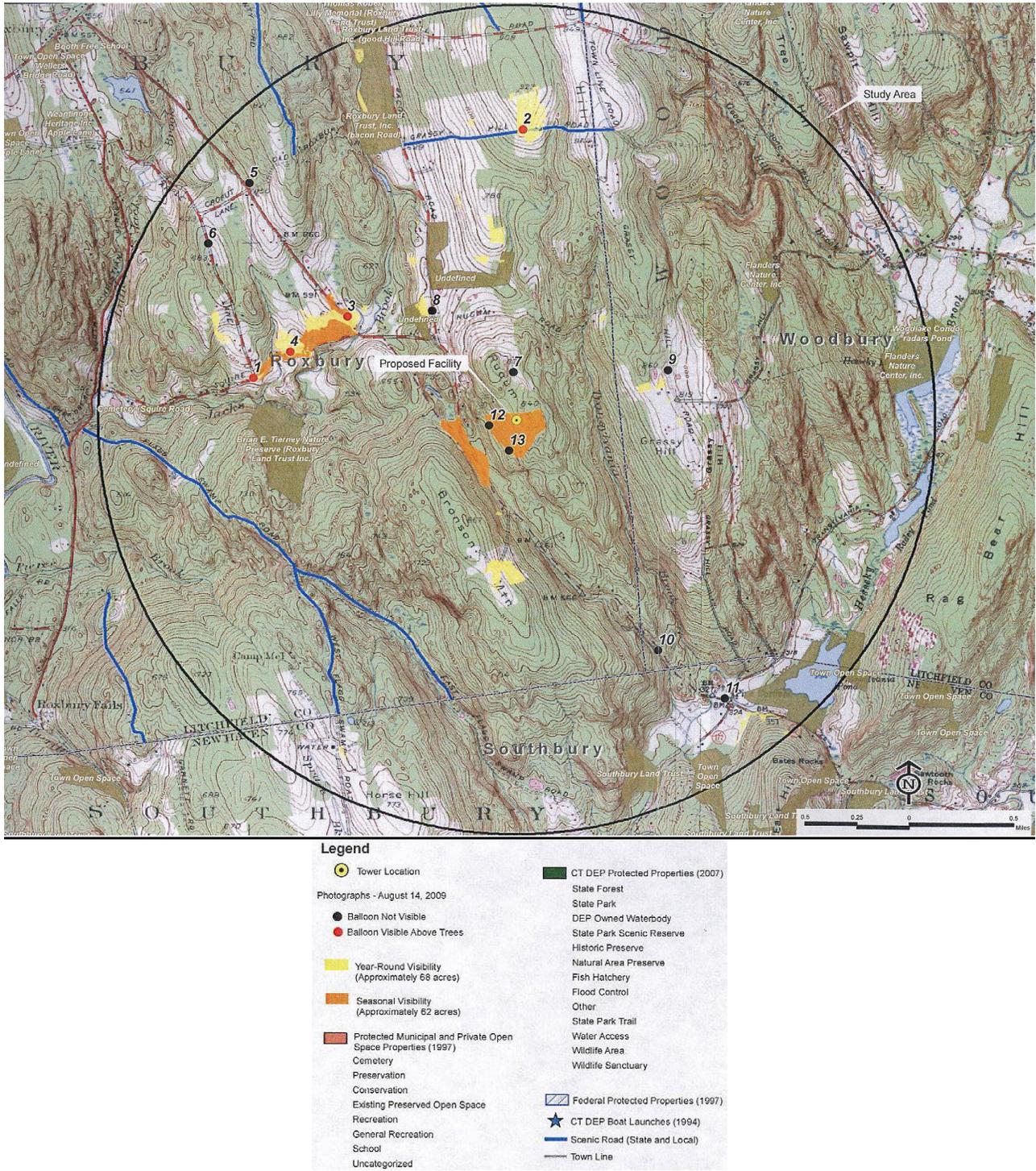


Legend

<ul style="list-style-type: none"> Proposed Tower Location Photographs - January 6, 2010 Balloon is visible through trees Balloon visible above trees Year-Round Visibility Area (Approximately 18 acres) Seasonal Visibility Area (Approximately 47 acres) Protected Municipal and Private Open Space (CT DEP, 1997) Cemetery Preservation Conservation Existing Preserved Open Space Recreation General Recreation School Uncategorized 	<ul style="list-style-type: none"> CT DEP Property (CT DEP, May 2010) State Forest State Park DEP Owned Waterbody State Park Scenic Reserve Historic Preserve Natural Area Preserve Fish Hatchery Flood Control Other State Park Trail Water Access Wildlife Area Wildlife Sanctuary Federal Open Space (CT DEP, 2004) Boat Launches (CT DEP, Dec 2000) Scenic Road (State and Local) Town Line
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(AT&T 1, Tab 3C)

Figure 19: Site B Viewshed Map and Key



(AT&T 1, Tab 4C)

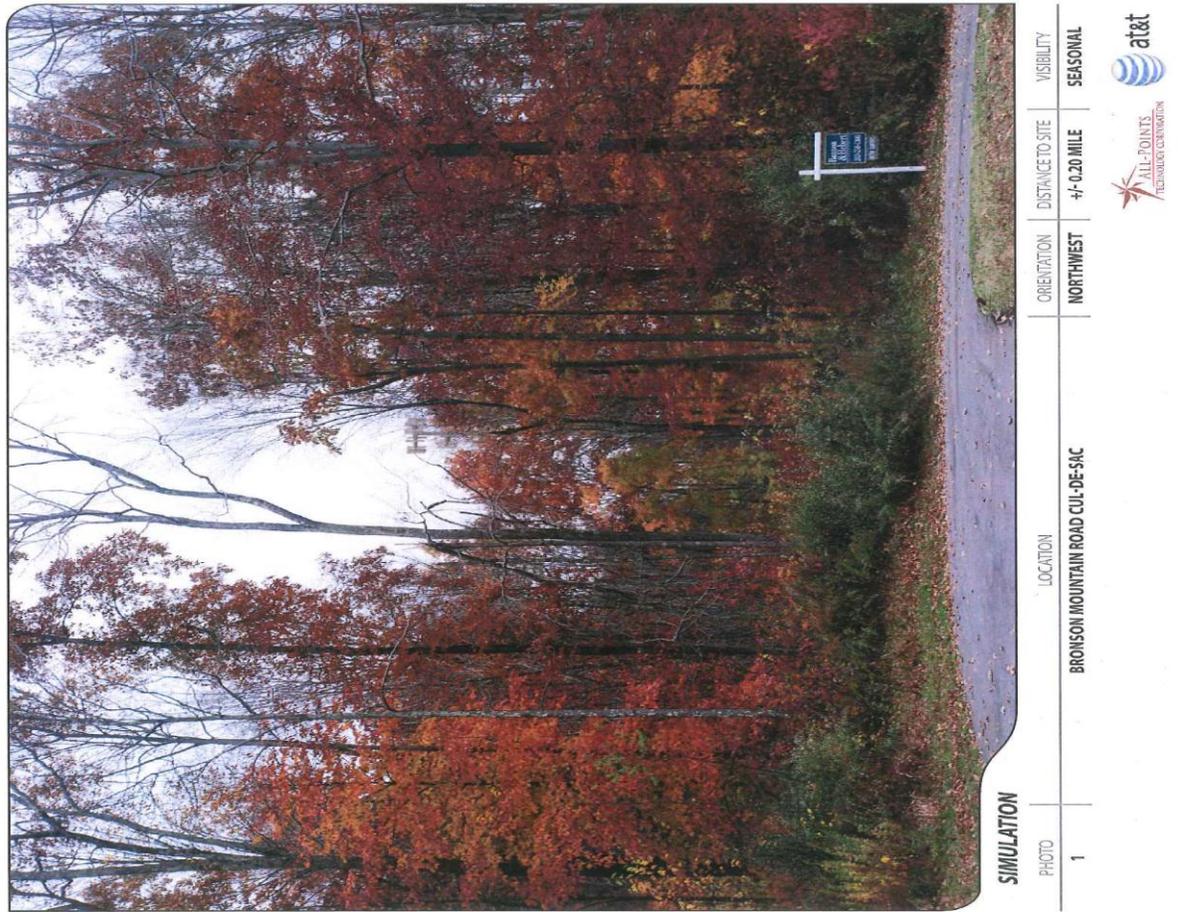
Figure 20: View of Proposed Site A Tower from Bronson Mountain Road



VIEW	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
9	END OF BRONSON MOUNTAIN ROAD	NORTHWEST	0.18 MILE +/-	YEAR-ROUND

(AT&T 1, Tab 3C)

Figure 21: View of Site A Tower from Bronson Mountain Road w/ 100-foot shift to north



(AT&T 15)

Figure 22: Proposed View of Site B from Squire Road and Apple Lane



PHOTO TAKEN FROM SQUIRE ROAD AT APPLE LANE, LOOKING SOUTHEAST
DISTANCE FROM THE PHOTOGRAPH LOCATION TO SITE IS 1.27 MILES +/-

(AT&T 1, Tab 4C)